

NEW PEORIINI (LEPIDOPTERA: PYRALIDAE: PHYCITINAE)
FROM BRAZIL

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Abstract.—*Metacommotria beckeri*, n. gen., n. sp., *Cipopeoria camura*, n. gen., n. sp., and *Harnochina digitata*, n. sp. are described from Brazil. A description is also provided for the female of *Zapalla dentata* Shaffer, the first known female representative of the genus. The latter species, previously known only from the type locality of south-eastern Brazil, is herein recorded from Planaltina (Distrito Federal), Alto Paraíso (Goiás), and Chapada Guimaraes (Mato Grosso). Photographs of adult moths are provided for all four species, male head profiles for the three new species, and male antenna photomicrographs and wing venation drawings for *M. beckeri* and *C. camura*. Male genitalia photographs are given for *M. beckeri*, *H. digitata*, *Z. dentata*, and female genitalia photographs for *C. camura* and *Z. dentata*.

Key Words: Peoriini, Phycitinae, moths, Neotropical, taxonomy

I recently had the pleasure of examining a fine assemblage of approximately 100 specimens of Brazilian Peoriini collected by Vitor Becker. Among these were three undescribed species and the first known female of the genus *Zapalla* Shaffer, that of *Z. dentata* Shaffer.

MATERIALS AND METHODS

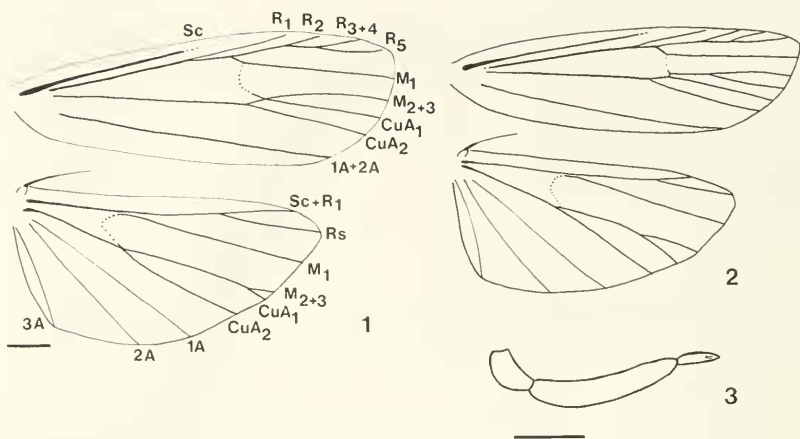
Prepared microscope slides were mounted in Euparal. Moths and slides were examined using a Wild M5 stereo microscope, and slides were also examined at high power and photographed with an Olympus Vanox AHB3 microscope. Color names follow the ISCC-NBS Color-Name Charts (Kelly 1965) except for small structures where only general designations could be given. Moths and color samples were viewed together using the Wild microscope and a fluorescent ring light. Holotypes and most paratypes are deposited in the Museu Nacional, Rio de Janeiro [NMRJ], a single

paratype each for *M. beckeri* and *C. camura* is deposited in the National Museum of Natural History, Smithsonian Institution, Washington, DC [USNM]. All other specimens are in the collection of Vitor Becker [VOB], Brasília, Brazil.

Metacommotria Shaffer, new genus

Type species.—*Metacommotria beckeri* Shaffer, new species.

Diagnosis.—The male genitalia are similar to those of *Commotria* Berg, particularly in possessing an uncus with a pair of lateral spicate processes which are long, curve cephalad, stout at the base and taper to a sharp point. The medial process of the uncus is somewhat bandlike, not matching that of any particular species of *Commotria*, but falling within the range of variation (most narrowly bandlike) exhibited by that genus. Indeed, this species would fit well within *Commotria* but for the male antennae, which are subserrate rather than pectinate as in *Commotria*.



Figs. 1-3. Wing venation and male palpus. 1, *Metacommtoria beckeri*. 2-3, *Cipopecoria camura*. Scale bar = 1 mm (1,2), 0.5 mm (3).

Description.—*Male*: Frons conical. Labial palpus (Fig. 8) correct to somewhat obliquely ascending with third segment correct. Maxillary palpus cylindrical, not reaching end of frons. Proboscis much reduced, not usually visible between labial palpi. Ocellus normal, black with clear center, separated from eye by about its own width. Antenna (Fig. 11) shaft subserrate, basal segments fused and enclosed by parallel rows of scales, but otherwise unmodified. Forewing (Fig. 1) with ten veins; R_2 stalked with R_{3+4} about $\frac{2}{5}$ length of latter; R_{3+4} stalked about $\frac{1}{5}$ that length; from well before upper outer angle of cell; M_1 from the angle; M_{2+3} fused, from lower outer angle of cell, usually from same point as CuA_1 (M_{2+3} well separated from CuA_1 in holotype); CuA_2 from well before the angle. Hind wing with seven veins (1A, 2A, and 3A counted as one vein); M_{2+3} fused and stalked with CuA_1 from about $\frac{1}{2}$ to over $\frac{2}{5}$ length of latter, from lower outer angle of cell; CuA_2 from very near the angle.

Genitalia (Figs. 13-16) with medial process of uncus an irregular somewhat semi-

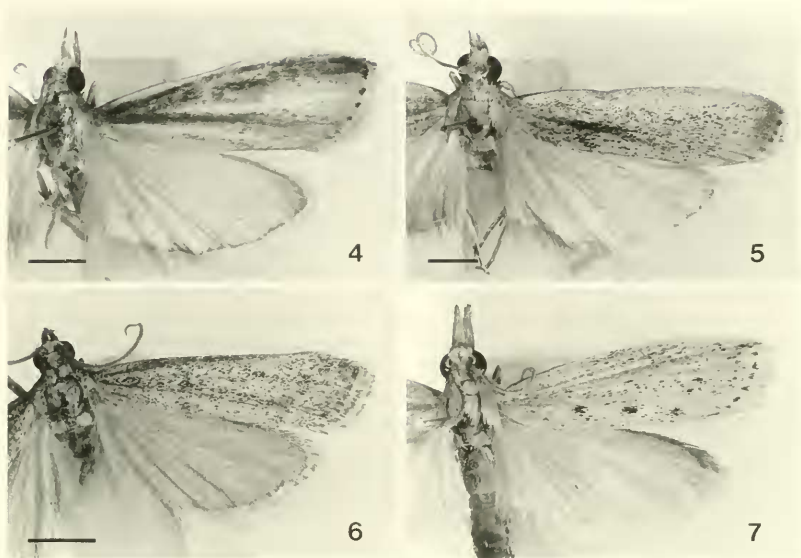
circular band; lateral process a long, curved, sharp-pointed spine. Gnathos arms flat, incomplete, medially with a small sclerite or a few small teeth. Juxta conical, lacking scale tufts. Valva with costa terminating in a small tooth; sacculus hirsute, at base with a cluster of long stiff slightly curved setae, about half as long as valva and parallel to valva axis. Aedeagus cylindrical, about 4 times as long as wide; vesica with two cornuti (Figs. 15-16), one approximately twice as large as the other, each bearing small pointed scales on one side; vesica devoid of microspines.

Etymology.—The generic name is formed by adding the Greek *meta* (in its meaning of near) to *Commotria*, in reference to the similarity in male genitalia. The name is not necessarily intended to imply close phylogenetic relationship. Gender: feminine.

Metacommtoria beckeri Shaffer,
new species

(Figs. 1, 4, 8, 11, 13-16)

Diagnosis.—This is the only known species in the genus.



Figs. 4-7. Adults showing right wings. 4, *Metacommotria beckeri*, holotype. 5, *Cipopcoria camura*, holotype. 6, *Harnochina digitata*, holotype. 7, *Zapalla dentata*, ♂, Alto Paraíso, Brazil; to show 3 spots on vein 1A+2A. Scale bar = 2 mm (6 & 7 to same scale).

Description.—*Male*: Frons brownish pink dorsally, light brownish pink to yellowish white laterally. Labial palpus with basal segment white, second segment white to light brownish pink on ventral half of outer side, gradually becoming brownish pink on dorsal half of outer side; third segment brownish pink. Vertex, occiput, patagium, and tegula light reddish brown, tegula darker near wing base. Forewing (Fig. 4) length 8.0–9.5 mm ($n = 5$). Costa brown on basal third of wing, narrow but prominent band of yellowish white between costa and subcosta extends from wing base to apex. Broader band of nearly solid brown extending from wing base to apex, bounded anteriorly by subcosta, posteriorly by 1A+2A near wing base and by M_1 near apex; a second less prominent brown band between cell and 1A+2A, this band diluted with yellowish pink scales. Band of yellow-

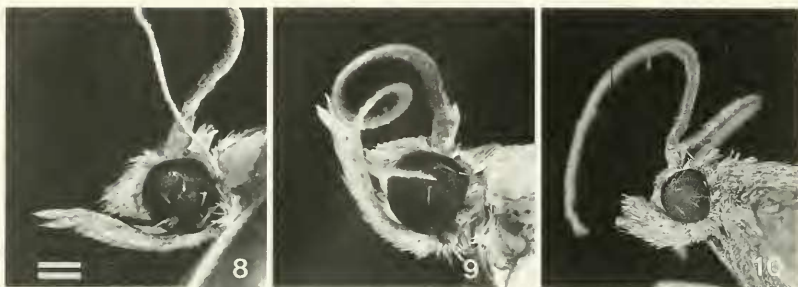
ish pink extending from distal half of cell to outer wing margin, bounded approximately by M_1 and CuA_1 . Ground predominantly yellowish pink posterior to 1A+2A. Band of yellowish white on cubitus, especially prominent at lower outer angle of cell, extending onto M_{2-3} and CuA_1 , poorly defined to absent on CuA_2 , prominent on 1A+2A. Dark brown spots between veins on outer wing margin.

Genitalia as described for the genus.

Holotype ♂.—Brazil, Espírito Santo, Linhares, 40 m. 05–09 April 1992. V. O. Becker; 82680; ♂ genitalia on slide 2671, J. C. Shaffer [NMRJ].

Paratypes.—3 ♂, same data as holotype, one specimen J. C. Shaffer genitalia slide 2678 [USNM]; another, wing slide 2757; third undissected [NMRJ].

Other specimen examined.—♂, Brazil, Rondônia, Vilhena, 600 m, 9 December



Figs. 8–10. Heads, left profile. 8, *Metacommotria beckeri*, holotype. 9, *Cipopeoria camura*, holotype. 10, *Harmochina digitata*, holotype. Scale bar = 0.5 mm (8–10).

1997, V. O. Becker; 111786; J. C. Shaffer genitalia slide 2679; [VOB].

Remarks.—A female (J. Shaffer genitalia slide no. 2701) from Acailandia, Maranhão is essentially identical in wing maculation and venation and may be conspecific.

Etymology.—The specific epithet honors the collector, Dr. Vítor Becker.

Cipopeoria Shaffer, new genus

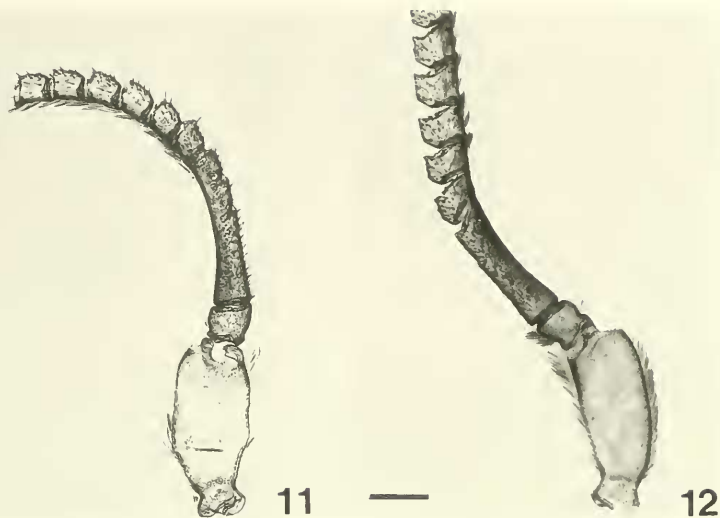
Type species.—*Cipopeoria camura* Shaffer, new species.

Diagnosis.—The male genitalia somewhat resemble those of *Homosassa* Hulst, notably in that the lateral arms of the uncus are slender, straight, unbranched, tapering, and ventrally directed in a plane perpendicular to the body axis. The gnathos of *Cipopeoria* lacks the stout lateral arms seen in *Homosassa*. Female genitalia of *Cipopeoria* have a large signum, those of *Homosassa* lack a signum. The male labial palpi of *Cipopeoria* are slender and upturned (Fig. 9), those of *Homosassa* are broader and obliquely ascending (see Fig. 2, Shaffer, 1976b).

Description.—Labial palpus of male (Figs. 3, 9) with second segment slender, curved basally, upturned; of female porrect, about three times as long as eye diameter. Maxillary palpus moderately well developed, extending just beyond eye in male, nearly to end of frons in female. Antenna

shaft sublaminar in male, basal segments fused, posterior surface with sinus, sinus surface somewhat concave and bordered by parallel pair of short scale tufts; shaft in female filiform, finely ciliate, lacking basal modification. Ocellus well developed, separated from eye by about its own width. Forewing (Fig. 2) with eleven veins; R_1 well separated from base of R_{2+5} , latter from well before upper outer angle of cell; R_2 from about $\frac{1}{3}$ and R_{3+4} from just over $\frac{1}{2}$ length of R_{2+5} ; M_1 from upper outer angle; M_{2+3} stalked about $\frac{1}{3}$ its length, from lower outer angle; CuA_1 , from very near the angle; CuA_2 from well before the angle. Hind wing with seven veins (1A, 2A, and 3A counted as one vein); M_{2+3} fused, stalked with CuA_1 about $\frac{2}{3}$ its length.

Male genitalia (Figs. 17–20) with medial process of uncus weak, bandlike; lateral process basally broad, subtriangular, distally slender, straight, unbranched, tapering, and ventrally directed in a plane perpendicular to the body axis. Gnathos a broad bilobed plate with a pair of anteriorly directed medial spines and along lateral margin of each lateral lobe a pair of ventromedially directed spines. Juxta horseshoe shaped, somewhat flared laterally. Valva with costa terminating in blunt tooth. Aedoeagus subcylindrical, 2.5 times as long as maximum width, tapering somewhat posteriorly; vesica with a pair of prominent subequal ser-



Figs. 11–12. Male right antennae, basal region, partially denuded. 11, *Metacommotria beckeri*, holotype. 12, *Cipopeoria camura*, holotype. Scale bar = 0.2 mm (11, 12).

rate cornuti (Figs. 19–20) and a few minute teeth.

Female genitalia (Figs. 23–24) with ovipositor lobes finely setose, dorsal and posterior elements meeting at 160° angle, weakly sclerotized. Apophyses slender; posterior apophysis weakly curved, about $\frac{3}{4}$ length of anterior apophysis; anterior apophysis straight. Ovipositor separated little, if any, from eighth abdominal segment, the latter heavily sclerotized, its posterior $\frac{2}{3}$ strongly folded. Ostium bursae membranous. Posterior half of ductus bursae well sclerotized, considerably flattened, smooth; anterior half membranous, with scattered minute triangular teeth. Corpus bursae membranous, with large irregular platelike signum bearing numerous inwardly directed spines. Ductus seminalis from tapering posterior end of corpus bursae (Fig. 23, arrow).

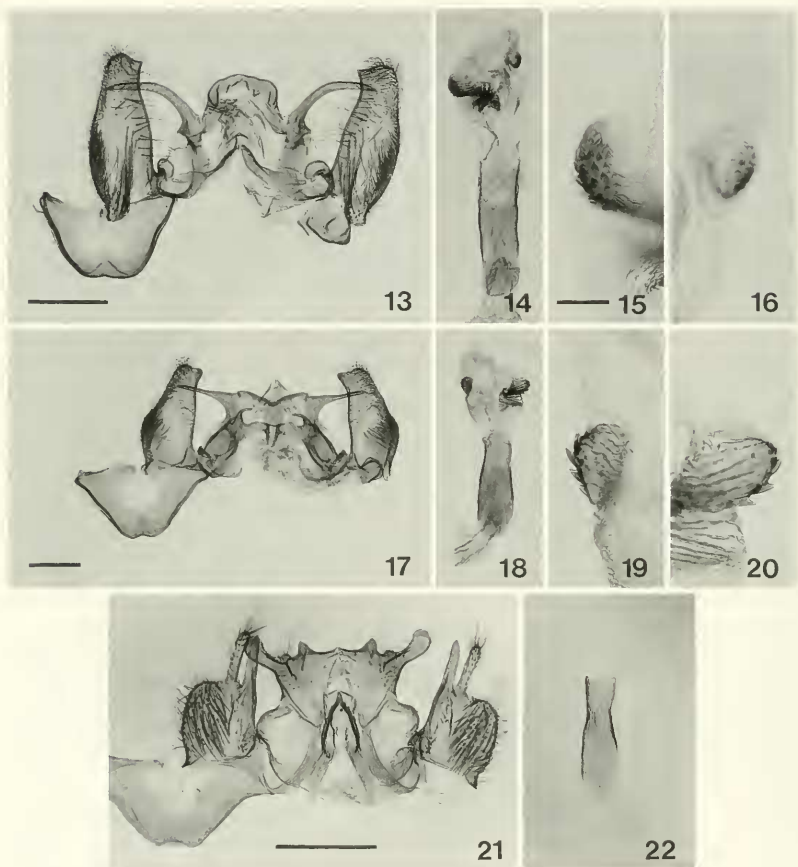
Etymology.—The generic name is derived from the name of the type locality of

the type species combined with a reference to the Tribe Peoriini. Gender: feminine.

***Cipopeoria camura* Shaffer, new species**
(Figs. 2, 3, 5, 9, 12, 17–20, 23–24)

Diagnosis.—This is the only known species in the genus.

Description.—Frons grayish reddish brown dorsally, yellowish white ventrally. Labial palpus with first and second segments grayish reddish brown dorsally, yellowish white ventrally and laterally except grayish reddish brown near dorsal margin and with a few scattered scales of that color elsewhere; third segment pale orange yellow throughout. Vertex grayish reddish brown; yellowish white posterior and posteriolaterally from antenna base. Occiput grayish reddish brown dorsally, similar behind eye, but interrupted with narrow bars of yellowish white. Patagium and tegula light grayish reddish brown, darker at wing



Figs. 13-22. Male genitalia. 13-16, *Metacomptria beckeri*, holotype; 13, Genitalia, aedeagus removed. 14, Aedeagus. 15, Large cornutus. 16, Small cornutus. 17-20, *Cipopecoria camura*, holotype. 17, Genitalia, aedeagus removed. 18, Aedeagus. 19, Small cornutus. 20, Large cornutus. 21-22, *Harnochina digitata*, holotype. 21, Genitalia, aedeagus removed. 22, Aedeagus. Scale bar = 0.5 mm (13-14, 17-18, 21-22), 0.1 mm (15-16, 19-20).

base. Forewing (Fig. 5) length 6.0-11.0 mm ($n = 7$). Costa grayish reddish brown at base, light orange yellow distally. Ground white anterior to cubitus, heavily sewn with a mixture of grayish reddish brown and dark brown scales, lightest on distal half of wing. Ground light brown posterior to cell and near outer wing mar-

gin, a large irregular dark brown patch between 1A+2A and cell, extending posterior to 1A+2A. Terminal line of dark brown spots between veins. All wing markings diffuse, ill defined; no veins with white tracing.

Genitalia as described for the genus.

Holotype ♂.—Brasil, Minas Gerais,

1,400 m. Serra do Cipó, 17–19 April 1991, V. O. Becker; no. 78056; ♂ genitalia on slide 2672 J. C. Shaffer [NMRJ].

Paratypes.—2 ♂, same data as holotype; no. 78056, genitalia slide 2680 [USNM]; no. 78052, genitalia slide 2694. 2 ♀, same data as holotype; no. 78053, genitalia slides 2690, 2704 [NMRJ].

Other specimens examined (1 ♂, 1 ♀).—♂, Nova Lima, Minas Gerais, 25–27 December 1982, V. O. Becker; no. 50267; ♂ genitalia on slide 2670. ♀, Bonito, Bahia, 1,000 m, 25 April 1991, V. O. Becker; no. 78464; not dissected [VOB].

Etymology.—The specific epithet is derived from the Latin *camur* (turned inward) in reference to the inward curving hooks of the gnathos.

***Harnochiina digitata* Shaffer, new species**
(Figs. 6, 10, 21–22)

Diagnosis.—The division of the distal portion of the valva of the male genitalia into two slender digitate processes, one membranous, the other a heavily sclerotized extension of the costa is unique within the genus, as is the V-shaped medial process of the gnathos. In the only other known species in the genus, *H. rectilinea* Dyar, the distal half of the valva (see Shaffer 1976a, fig. 11e) is angled relative to the basal half, broadly triangular, the apex rounded and simple; the medial process of the gnathos unbranched, forming a tapering spine.

Description.—*Male*: Labial palpus (Fig. 10) short, about 1.9 times as long as eye diameter; upturned, third segment correct. Maxillary palpus short (not clearly seen in holotype). Antenna shaft subserrate, cilia about half as long as segment width near base of shaft; basal segments unmodified, sinus absent. Forewing length 8.5 mm ($n = 1$); with eleven veins; R_1 well before upper outer angle of cell; R_2 free from cell, near to origin and closely parallel to R_{3+5} ; R_{3+4} stalked with R_5 about $\frac{2}{3}$ its length, from before the angle; M_1 from the angle; M_{2+3} stalked about half its length, from lower outer angle; CuA_1 from well before the an-

gle; CuA_2 separated from CuA_1 by about same distance. Ground overall light grayish brown, produced from a mixture of brownish pink and dark brown scales on a field of yellowish white scales. Markings darker than ground, diffuse, somewhat indistinct: small discal spot between base of M_1 and base of M_{2+3} ; antemedial, postmedial, terminal bands; fringe with two light and two dark bands. Hind wing with seven veins (1A, 2A, and 3A counted as one vein); M_{2+3} fused, stalked with CuA_1 about $\frac{2}{3}$ its length; from lower outer angle of cell.

Genitalia (Figs. 21–22) with medial process of uncus bearing a pair of smooth triangular posterior projections, more distally and dorsally a pair of irregular setose projections; lateral processes a pair of knobbed arms, these setose on posterior margin, smooth elsewhere. Gnathos with medial process a weakly sclerotized plate with a pair of divergent anterior arms and a well sclerotized V-shaped process, its apex posteriorly directed; lateral arms of gnathos broad, flat, weakly sclerotized. Juxta a semilunar plate, posterior margin emarginate. Valva subquadrate, ventral half covered with still anteriorly directed setae; costa heavily sclerotized, smooth, the free distal portion about $\frac{2}{3}$ length of entire costa; membranous digitate process closely parallel to free portion of costa. Anterior margin of vinculum truncated. Aedeagus about three times as long as maximum width, somewhat constricted on posterior half; vesica unarmed, lacking microspines.

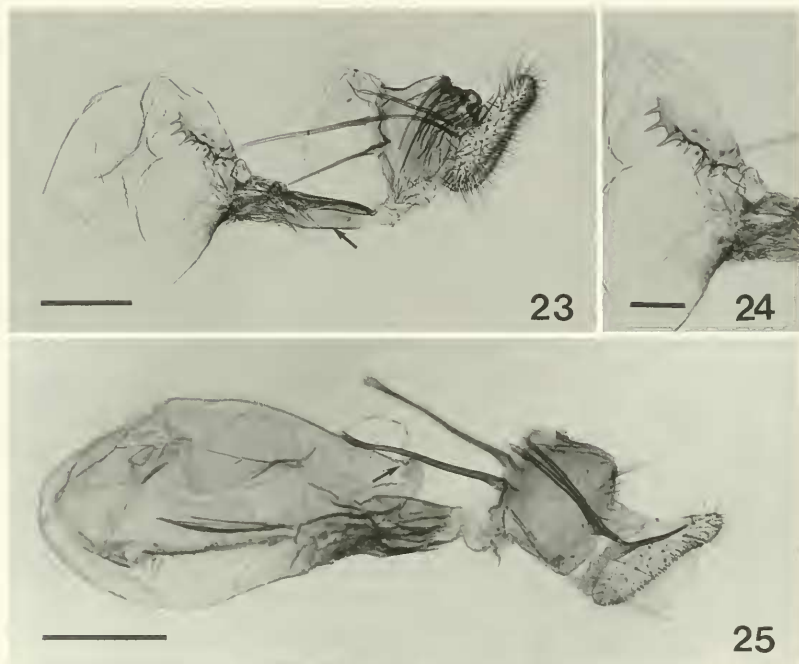
Holotype ♂.—Brazil, Goiás, Alto Paraíso, 1,400 m, 1–6 November 1996, V. O. Becker; 98791; ♂ genitalia on slide 2683, J. C. Shaffer [NMRJ].

Other specimens examined.—None.

Etymology.—The specific epitaph is derived from the Latin *digitus* in reference to the distal digitate extension on the valva of the male genitalia.

Zapalla dentata Shaffer
(Figs. 7, 25)

Zapalla dentata Shaffer 1976a: 322, figs. 3h, 6l, 9f.



Figs. 23–25. Female genitalia. 23–24, *Cipopeoria camura*. 23, Genitalia, arrow shows ductus seminalis origin. 24, Enlarged to show signum. 25, *Zapalla dentata*, genitalia (corpus bursae bearing spermatophore), arrow shows ductus seminalis origin. Scale bar = 0.5 mm (23, 25), 0.2 mm (24).

Previously known only from the male holotype (type locality: "S.E. Brazil"), the Becker material includes specimens from Planaltina (Distrito Federal), Alto Paraíso (Goiás), and Chapada Guimaraes (Mato Grosso). Specimens from the latter locality comprise three males and one female (J. Shaffer slide 2700) which forms the basis for the following description.

Description.—Male (see Shaffer, 1976). *Female*: Labial palpus porrect, about 3.5 times as long as eye diameter. Maxillary palpus very short, extending little if at all beyond pilifer, yellowish white.

Eye diameter 0.55 mm. Ocellus well developed, black with clear center, separated from eye by about its own diameter. Antenna

filiform, very finely ciliate. Genitalia (Fig. 25) with ovipositor lobes finely setose; upper element a slender well sclerotized rod, vertical element a diffuse lightly sclerotized plate about 3.75 times as high as wide. Apophyses straight or nearly so, anterior apophysis about 1.3 times as long as posterior apophysis. Ostium bursae membranous. Ductus bursae moderately well sclerotized, extensively folded longitudinally, unarmed; joining corpus bursae near its posterior end. Corpus bursae about twice as long as wide; unarmed, lacking signum and microspines [Fig. 25 shows remnants of a single spermatophore nearly filling the corpus bursae]. Ductus seminalis from tapering posterior end of corpus bursae (Fig. 25, arrow).

Remarks.—This is the first female known for the genus. The genitalia are generalized and show no apparent apomorphies. Externally *dentata* and *deliquella* (Zeller) are readily separated by the number of dark spots on vein 1A+2A, two spots in *deliquella*, three spots in *dentata*. An adult male of *dentata* is illustrated herein (Fig. 7) as the photograph (fig. 3h) in Shaffer 1976a does not show the third (middle) spot clearly.

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ratory) and an anonymous reviewer for helpful comments on the manuscript.

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